

	Field	Acres	Buffer	Net Ac.	Latitude	Long.	FSN#	Tract	Field	Tax ID #	RPC#
Michael Tuck	RO87-1	17.5	9.2	8.3	37.139	-79.610	2287	1135	1-3	233 2 4	23306400
	RO87-2	107.3	68.0	39.3	37.135	-79.605	2287	1124 1135	1-4, & 4-6, 8-9	233 2 18	23307500
										233 2 2	23307500
										233 2 4	23306400
										233 A 59	23306000
										233 A 62	23306300
										233 A 63	23306400
	RO87-3	42.1	5.0	37.1	37.136	-79.600	2287	1124 1172	6, 7, & 1-2, 10	233 A 60	23306200
										233 A 62	23306300
	RO87-4	12.9	0.0	12.9	37.135	-79.601	2287	1124 1172	6, 8, 10	233 A 60	23306200
										233 A 62	23306300
	RO87-5	5.5	1.5	4.0	37.136	-79.596	2287	1172	9	233 A 60	23306200
	RO87-6	20.3	8.1	12.2	37.137	-79.595	2287	1172	8	233 A 60	23306200
	RO87-7	31.5	8.7	22.8	37.130	-79.603	2287	1124	4	233 A 62	23306300
										233 A 65	23306600
	RO87-8	15.1	2.4	12.7	37.133	-79.601	2287	1124	12	233 A 62	23306300
	RO87-9	10.6	0.8	9.8	37.134	-79.609	2287	1135	9	233 A 63	23306400
	RO87-10	67.5	22.8	44.7	37.128	-79.588	2312	1198	7-12	234 A 14	23401200
	RO87-11	13.3	3.7	9.6	37.130	-79.592	2312	1198	3	234 A 22	23401900
	RO87-12	69.4	33.9	35.5	37.133	-79.593	2312	1198	1-2 & 4-5	234 A 22	23401900
	TOTALS	413.0		248.9							

Billy Tuck

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 4/2/2010 between Billy R. Tuck referred to here as "Landowner", and Rio-Nomic, Inc. referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Bedford City, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
233 A 60	23306200		

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ The Landowner is the sole owner of the properties identified herein.
☐ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Billy R Tuck owner Billy R Tuck
Landowner - Printed Name, Title Signature

1655 Tuck Rd Monck Va 24121
Mailing Address

Permittee:

Rio-Nomic Services the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Vaughn Buck Stevenson
Permittee - Authorized Representative
Printed Name

[Signature]
Signature

516 Rowntree Rd
Charlotte, NC 28217
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Bio-Nomic Services
Landowner: Billy R. Tuck

County or City: Bedford County

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Billy R Tuck
Landowner's Signature

2-2-16
Date

Marie Tuck

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 2/2/2016 between Marie M. Tuck referred to here as "Landowner", and Bio-Nomic Service referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Bedford City, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
233 A 65	23306600	233 24	23306400
233 A 62	23306300		
233 A 59	23306000		
233 22	23307500		
233 A 63	23306400		

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

☐ The Landowner is the sole owner of the properties identified herein.

☒ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

Class B biosolids Water treatment residuals Food processing waste Other industrial sludges
☒ Yes ☐ No ☐ Yes ☒ No ☐ Yes ☒ No

Marie M. Tuck, Landowner Marie M. Tuck 1655 Tuck Rd. Moneta, VA
Landowner - Printed Name, Title Signature Mailing Address 24121

Permittee:

Bio-Nomic Service the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Vaughan "Buck" Stevenson
Permittee - Authorized Representative
Printed Name

[Signature]
Signature

516 Bowtree Rd
Charlotte, NC 28217
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Bio-Nomic Services
Landowner: Marie M. Tuck

County or City: Bedford County

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Marie M. Tuck
Landowner's Signature

2-2-16
Date

Billy Tuck

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 2/2/2016 between Billy R. Tuck referred to here as "Landowner", and Bio-Nomic Services, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Radford City, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
233 A 65	233 0 6600	233 24	233 06400
233 A 62	233 06300		
233 A 59	233 06000		
233 2 2	233 07500		
233 A 63	233 06400		

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

☐ The Landowner is the sole owner of the properties identified herein.

☒ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

Class B biosolids	Water treatment residuals	Food processing waste	Other industrial sludges
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Billy R Tuck owner Billy R Tuck
Landowner - Printed Name, Title Signature

1655 Tuck Rd Monck Va 24121
Mailing Address

Permittee:

Bio-Nomic Services the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Vaughn "Buck" Stevenson for US
Permittee - Authorized Representative Signature
Printed Name

516 Rowntree Rd
Charlotte, NC 28217
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Bio-Nomic Services

County or City: Bedford County

Landowner: Billy R. Tuck

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Billy R Tuck
Landowner's Signature


2-2-14
Date

Search

Results

Details

Map

[Contact](#) | [GIS Page](#) [Log On](#) Printer-Friendly[View In Map](#) 

Tax Map #

233 A 63

Link

233 A 63

Parcel Number(RPC).

23306400

Address

1833 RADFORD CHURCH ROAD

[Link to Real Estate Lookup/Sketch](#)

Parcel Information

Valuation

Improvements

Ownership History

General Information

Owner:

TUCK BILLY R & MARIE M

Additional Owner:

Owner Address:

1655 TUCK RD
MONETA, VA 241214475

Legal Acreage:

80.5900

PCDesc:

5 Agricultural/Undevl(20-99ac)

Legal Description:

RADFORD FORD RD

Document Number:

Land Use

Tax Year: 1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

* TAX ID 233-A-63 + 233-2-4 COMBINED TOGETHER
+ SHARE SAME RPC # 23306400 FOR TAX PURPOSES *

R087-1

PART R087-2

Bedford, VA

Legend

Highway

Blue Ridge Parkway

US Primary

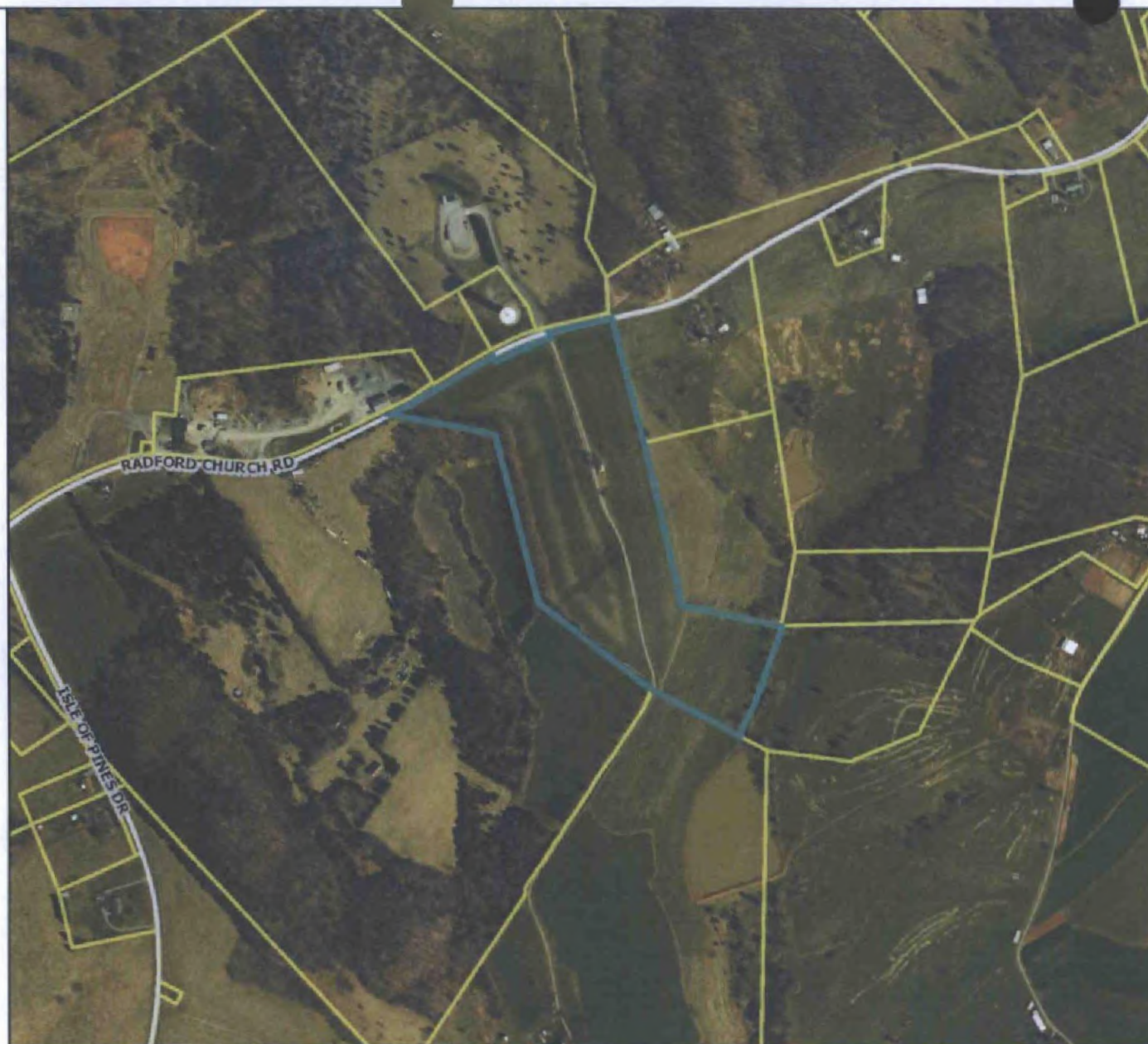
Virginia Primary

Roads

Parcels - County

Parcels - Town

Public School Boundary



PO87-1

PART PO87-2

Feet

0 200 400 600 800
1:9,028 / 1"=752 Feet

Title: Tuck, Billie & Marie 233 2 4 23306400

Date: 7/21/2016

DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Bedford County is not responsible for its accuracy or how current it may be.

[Search](#)[Results](#)[Details](#)[Map](#)[Contact](#) | [GIS Page](#) | [Log On](#)[Printer-Friendly](#)[View In Map](#)**Tax Map #**

233 A 63

Link

233 A 63

Parcel Number(RPC).

23306400

Address

1833 RADFORD CHURCH ROAD

[Link to Real Estate Lookup/Sketch](#)[Parcel Information](#)[Valuation](#)[Improvements](#)[Ownership History](#)**General Information****Owner:**

TUCK BILLY R & MARIE M

Additional Owner:**Owner Address:**1655 TUCK RD
MONETA, VA 241214475**Legal Acreage:**

80.5900

PCDesc:

5 Agricultural/Undevl(20-99ac)

Legal Description:

RADFORD FORD RD

Document Number:**Land Use****Tax Year:** 1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

PART R087-2

R087-9

Bedford, VA

Legend

Highway

- Blue Ridge Parkway
- US Primary
- Virginia Primary

Roads

- Parcels - County
- Parcels - Town
- Public School Boundary

PART 2087-2

2087-9






Feet

0 200 400 600 800
1:9,028 / 1"=752 Feet

Title: Tuck, Billie & Marie 233 A 63 23306400

Date: 7/21/2016

DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Bedford County is not responsible for its accuracy or how current it may be.

[Search](#)[Results](#)[Details](#)[Map](#)[Contact](#) | [GIS Page](#) | [Log On](#) [Printer-Friendly](#)[View In Map](#)  [Back To Results](#) **Tax Map #**

233 2 2

Link

233 2 1B

Parcel Number(RPC).

23307500

Address[Link to Real Estate Lookup/Sketch](#)[Parcel Information](#)[Valuation](#)[Improvements](#)[Ownership History](#)**General Information****Owner:**

TUCK BILLY R & MARIE M

Additional Owner:**Owner Address:**1655 TUCK RD
MONETA, VA 241214475**Legal Acreage:**

15.0800

PCDesc:

2 Single Family Res(1-19.99ac)

Legal Description:

RADFORD FORD RD

Document Number:

960006259

Land Use**Tax Year:** 1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

PART-R087-2

Bedford, VA

Legend

- E911 Address
- Highway
- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Driveway
- Parcels - County
- Parcels - Town
- Public School Boundary

PART K087-2





Title: Tuck Billy & Marie 233 2 2 23307500

Date: 5/17/2016

Feet
0 100 200 300 400
1:4,514 / 1"=376 Feet

DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Bedford County is not responsible for its accuracy or how current it may be.

[Search](#)[Results](#)[Database](#)[Map](#)[Contact](#) | [GIS Page](#) [Log On](#) [Printer-Friendly](#)[View In Map](#)  [Back To Results](#) 

Tax Map #

Link

Parcel Number(RPC).

Address

233 2 2

233 2 1B

23307500

[Link to Real Estate Lookup/Sketch](#)[Parcel Information](#)[Valuation](#)[Improvements](#)[Ownership History](#)**General Information**

Owner:

TUCK BILLY R & MARIE M

Legal Acreage:

15.0800

Additional Owner:

PCDesc:

2 Single Family Res(1-19.99ac)

Owner Address:

1655 TUCK RD
MONETA, VA 241214475

Legal Description:

RADFORD FORD RD

Document Number:

960006259

Land Use

Tax Year: 1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

PART POST-2

Bedford, VA

Legend

- E911 Address
- Highway
- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Driveway
- Parcels - County
- Parcels - Town
- Public School Boundary

PART 2087-2



Feet

0 100 200 300 400
1:4,514 / 1"=376 Feet



Title: Tuck Billy & Marie 233 2 1B 23307500

Date: 5/17/2016

DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Bedford County is not responsible for its accuracy or how current it may be.

Search

Map

[Contact](#) | [GIS Page](#) [Log On](#) Printer-Friendly[View In Map](#) 

Tax Map #	Link	Parcel Number(RPC).	Address
233 A 59	233 A 59	23306000	

[Link to Real Estate Lookup/Sketch](#)

[Valuation](#) [Improvements](#) [Ownership History](#)

General Information

Owner:	TUCK BILLY R & MARIE M	Legal Acreage:	2.7500
Additional Owner:		PCDesc:	2 Single Family Res(1-19.99ac)
Owner Address:	1655 TUCK RD MONETA, VA 241214475	Legal Description:	ROCK CASTLE CRWB114 385
		Document Number:	960006259

Land Use

Tax Year: 1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

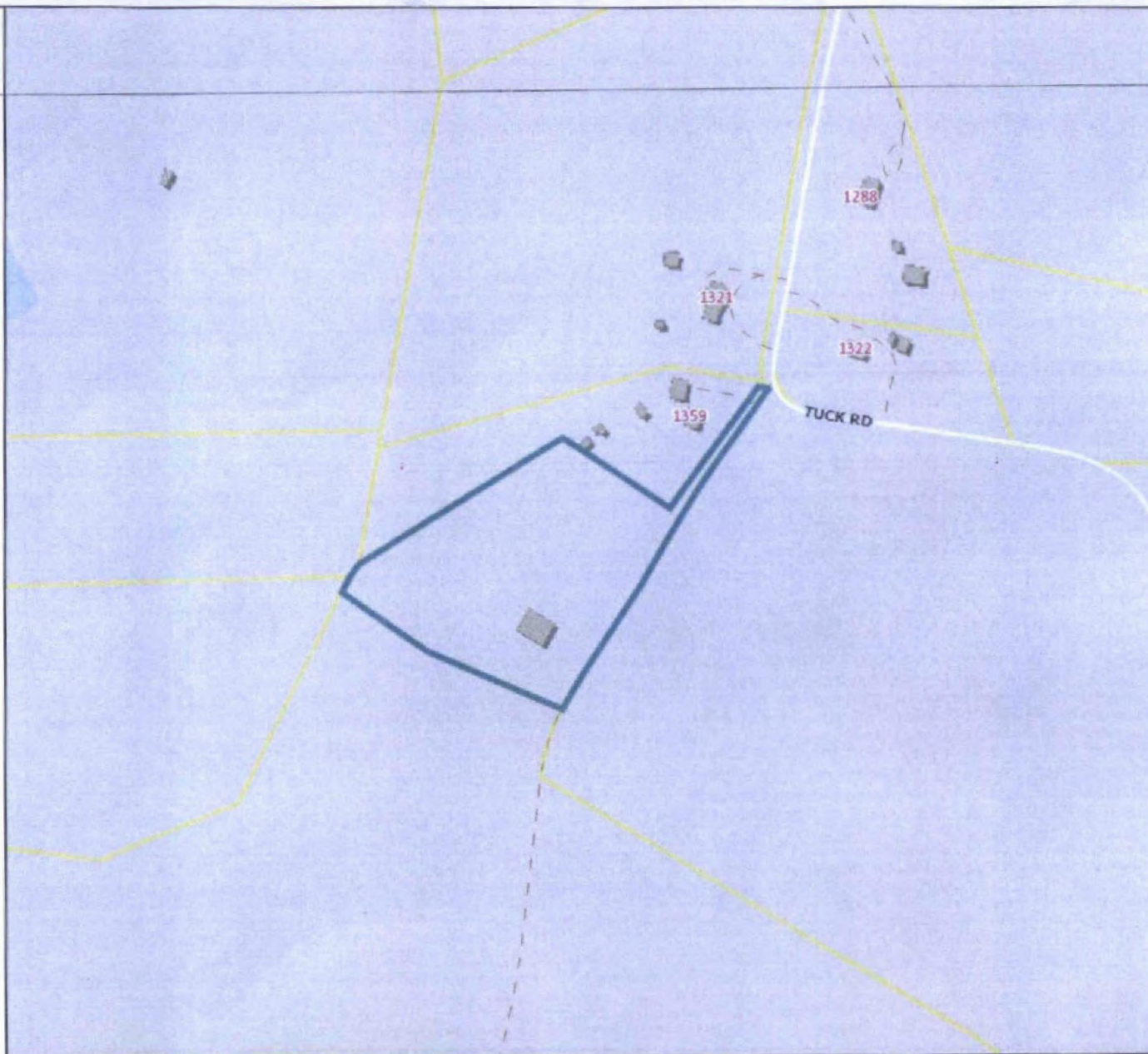
PART PG 7-2

Bedford, VA

Legend

- E911 Address
- Highway
- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Driveway
- Parcels - County
- Parcels - Town
- Public School Boundary

PART 2087-2



Title: Tuck Billy & Marie 233 A 59 23306000

Date: 5/17/2016

Feet
0 100 200 300 400
1:4,514 / 1"=376 Feet

DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Bedford County is not responsible for its accuracy or how current it may be.

Search

Results

Details

Map

Contact | GIS Page | Log On

Printer-Friendly

View In Map

Tax Map #

233 A 62

Link

233 A 62

Parcel Number(RPC).

23306300

Address

1361 TUCK ROAD

[Link to Real Estate Lookup/Sketch](#)

Parcel Information

Valuation

Improvements

Ownership History

General Information

Owner:

TUCK BILLY R & MARIE M

Legal Acreage:

87.0000

Additional Owner:

PCDesc:

5 Agricultural/Undevl(20-99ac)

Owner Address:

1655 TUCK RD
MONETA, VA 241214475

Legal Description:

GRUBBS MILL CR

Document Number:

960006259

Land Use

Tax Year: 1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

PART R087-2

PART R087-3

PART R087-4

PART R087-7

R087-8

Bedford, VA

Legend

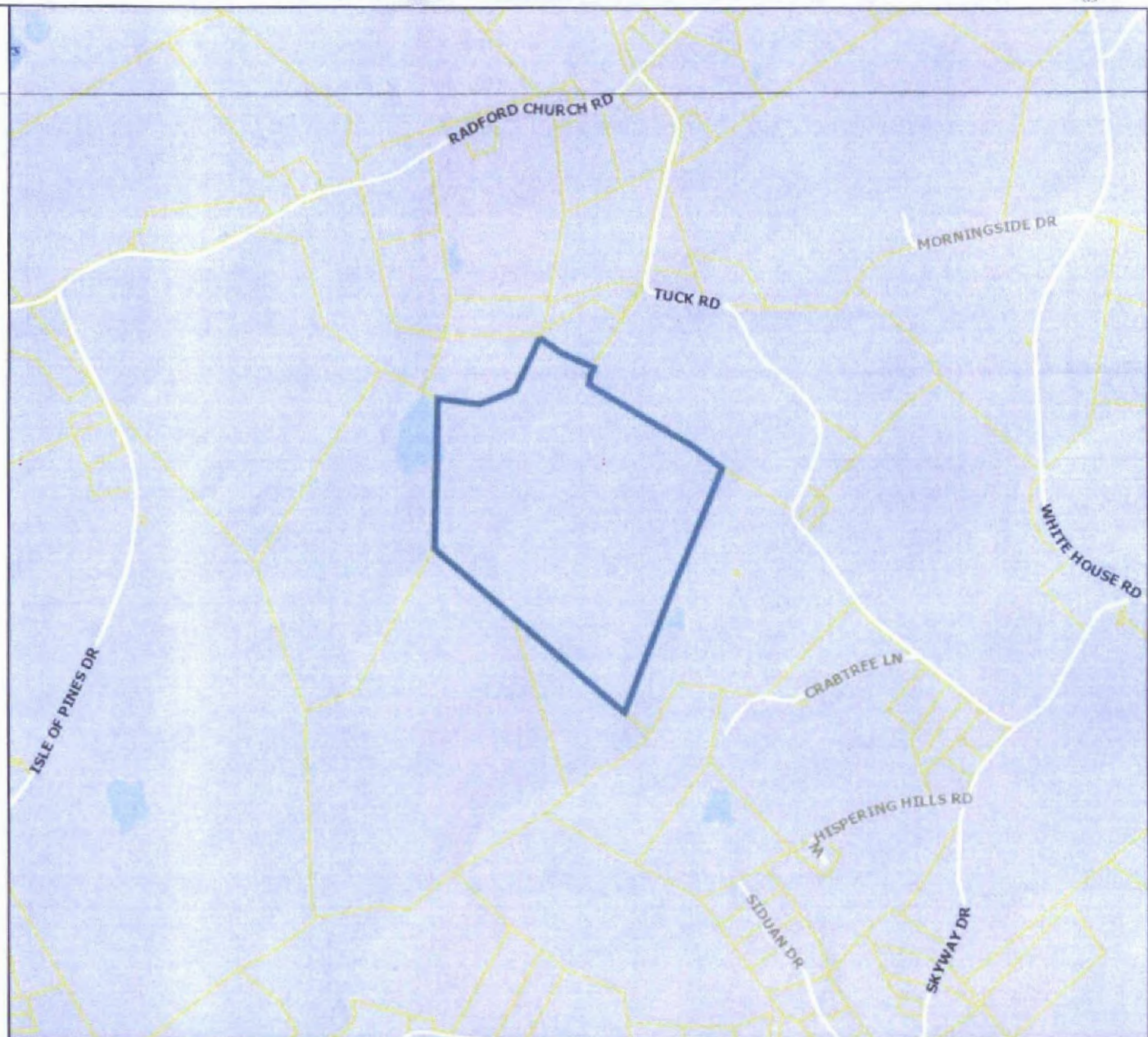
Highway

- Blue Ridge Parkway
- US Primary
- Virginia Primary

Roads

- Parcels - County
- Parcels - Town

PART R087-2
PART R087-3
PART R087-4
PART R087-7
R087-8



Title: Tuck Billy & Marie 233 A 62 23306300

Date: 5/17/2016

Feet

0 500 1000 1500 2000
1:18,056 / 1"=1,505 Feet

DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Bedford County is not responsible for its accuracy or how current it may be.

Search

Reprints

Details

Map

[Contact](#) | [GIS Page](#) [Log On](#) Printer-Friendly[View In Map](#) 

Tax Map #

Link

Parcel Number(RPC).

Address

233 A 60

233 A 60

23306200

1726 TUCK ROAD

[Link to Real Estate Lookup/Sketch](#)

Parcel Information

Valuation

Improvements

Ownership History

General Information

Owner:

TUCK BILLY ROLAND

Legal Acreage:

58.4900

Additional Owner:

PCDesc:

5 Agricultural/Undeveloped(20-99ac)

Owner Address:

1655 TUCK RD
MONETA, VA 24121

Legal Description:

GRUBB MILL CR

Document Number:

Land Use

Tax Year: 1997

1998

1999

2000

2001

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2003

2004

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2016

PART R087-3
 PART R087-4
 R087-5
 R087-6

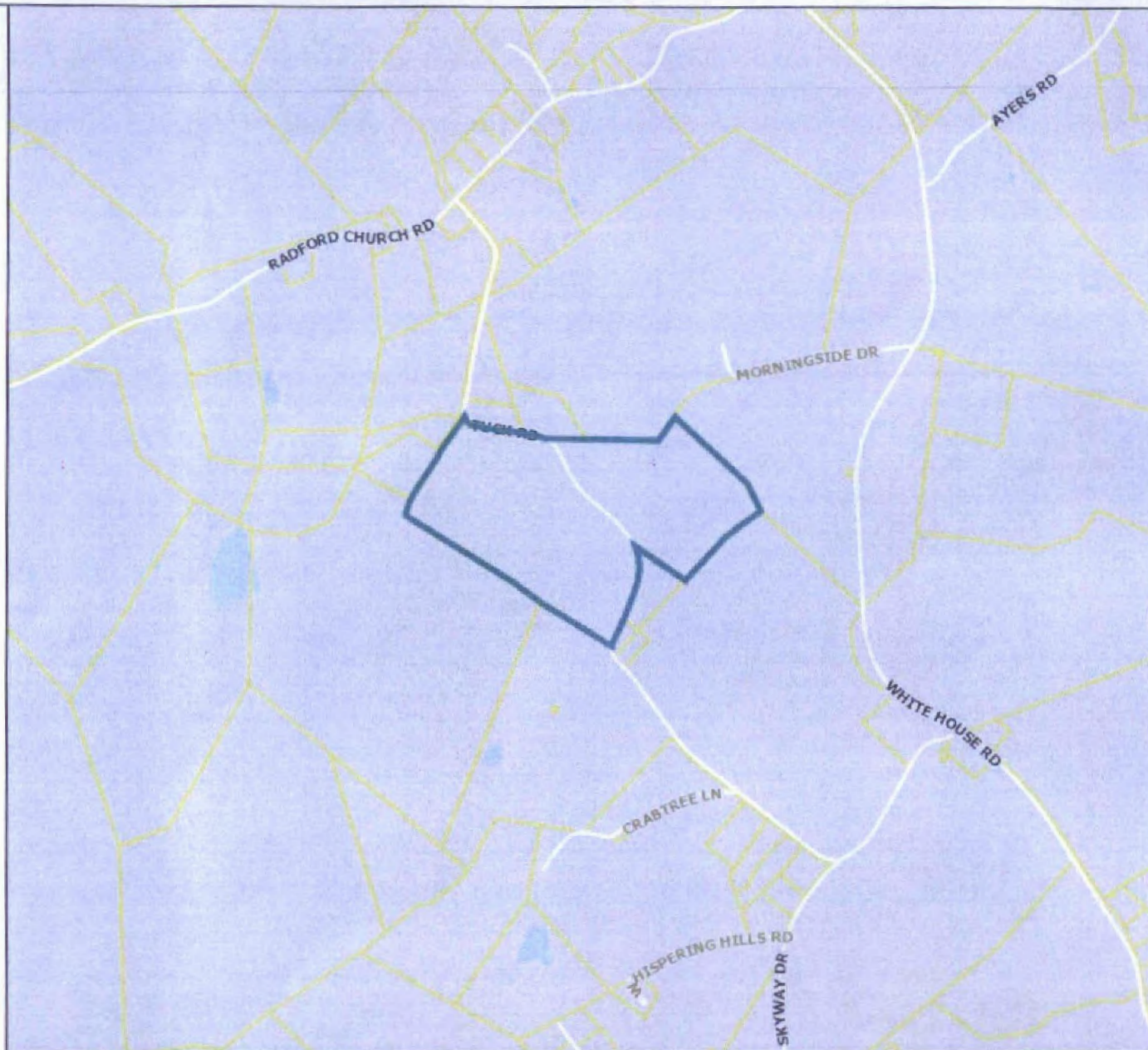
Bedford, VA

Legend

Highway

- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Parcels - County
- Parcels - Town
- Public School Boundary

PART R087-3
PART R087-4
R087-5
R087-6



Title: Tuck Billy R 233 A 60 23306200

Date: 5/17/2016

Feet

0 500 1000 1500 2000
1:18,056 / 1"=1,505 Feet

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[Search](#)[Results](#)[Details](#)[Map](#)[Contact](#) | [GIS Page](#) [Log On](#)[Printer-Friendly](#)[View in Map](#)

Tax Map #

233 A 65

Link

233 A 65

Parcel Number(RPC).

23306600

Address

[Link to Real Estate Lookup/Sketch](#)[Parcel Information](#)[Valuation](#)[Improvements](#)[Ownership History](#)**General Information**

Owner:

TUCK BILLY R & MARIE M

Legal Acreage:

13.3300

Additional Owner:

PCDesc:

2 Single Family Res(1-19.99ac)

Owner Address:

1655 TUCK RD
MONETA, VA 241214475

Legal Description:

GRUBBS MILL CR

Document Number:

960006259

Land Use

Tax Year: 2007

2008

2009

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2015

2016

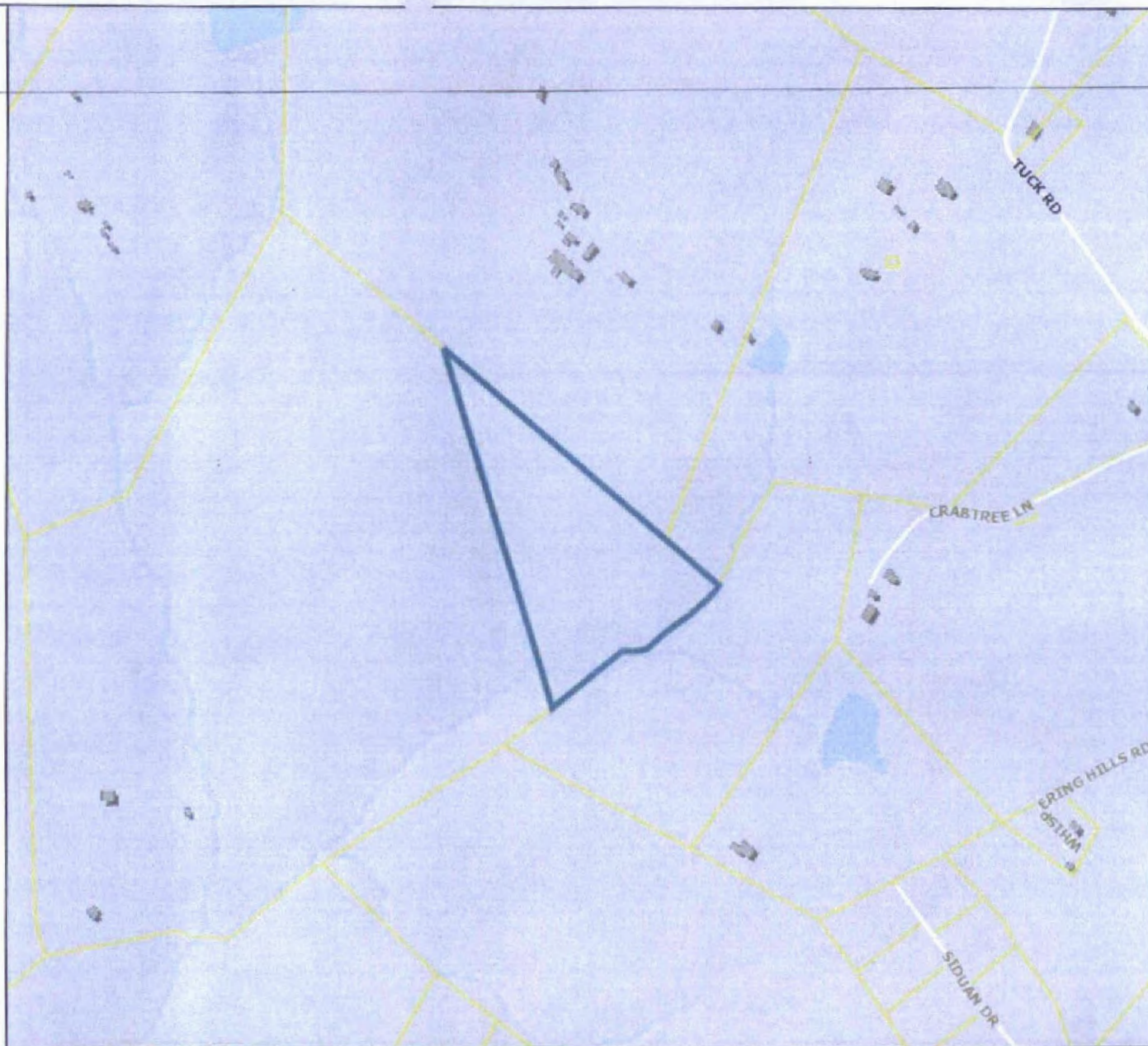
PART R087-7

Bedford, VA

Legend

- Highway
- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Parcels - County
- Parcels - Town
- Public School Boundary

PART 1087-7



Title: Tuck Billy & Marie 233 A 65 23306600

Date: 5/17/2016

Feet
0 200 400 600 800
1:9,028 / 1"=752 Feet

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ATTE Michael Tuck

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 2/2/2016 between Michael A. Tuck referred to here as "Landowner", and Bio-Nomic Serv, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Bedford City, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
<u>234 A 14</u>	<u>23401200</u>		
<u>234 A 22</u>	<u>23401900</u>		

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ The Landowner is the sole owner of the properties identified herein.
☐ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Michael A. Tuck
Landowner - Printed Name, Title

Michael A. Tuck
Signature

1726 Tuck Rd. Manassas VA 24121
Mailing Address

Permittee:

Bio-Nomic Services the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

Vaughn Buck Stevenson
Permittee - Authorized Representative
Printed Name

Donald R. Stevenson
Signature

516 Rowntree Rd
Charlotte, NC 28217
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Bio-Nomic Services
Landowner: Michael A. Tuck

County or City: Bedford County

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:


Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

*

Michael A. Tuck
Landowner's Signature

2-2-16
Date

[Search](#)[Results](#)[Details](#)[Map](#)[Contact](#) | [GIS Page](#) | [Log On](#) [Printer-Friendly](#)[View In Map](#) **Tax Map #**

234 A 14

Link

234 A 14

Parcel Number(RPC).

23401200

Address

1240 SKYWAY DRIVE

[Link to Real Estate Lookup/Sketch](#)[Parcel Information](#)[Valuation](#)[Improvements](#)[Ownership History](#)**General Information****Owner:**

TUCK MICHAEL A

Additional Owner:**Owner Address:**1726 TUCK RD
MONETA, VA 24121**Legal Acreage:**

91.5600

PCDesc:

5 Agricultural/Undeveloped(20-99ac)

Legal Description:

ROCK CASTLE CR

Document Number:

WF160000468

Land Use**Tax Year:** 1997

1998

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2015

2016

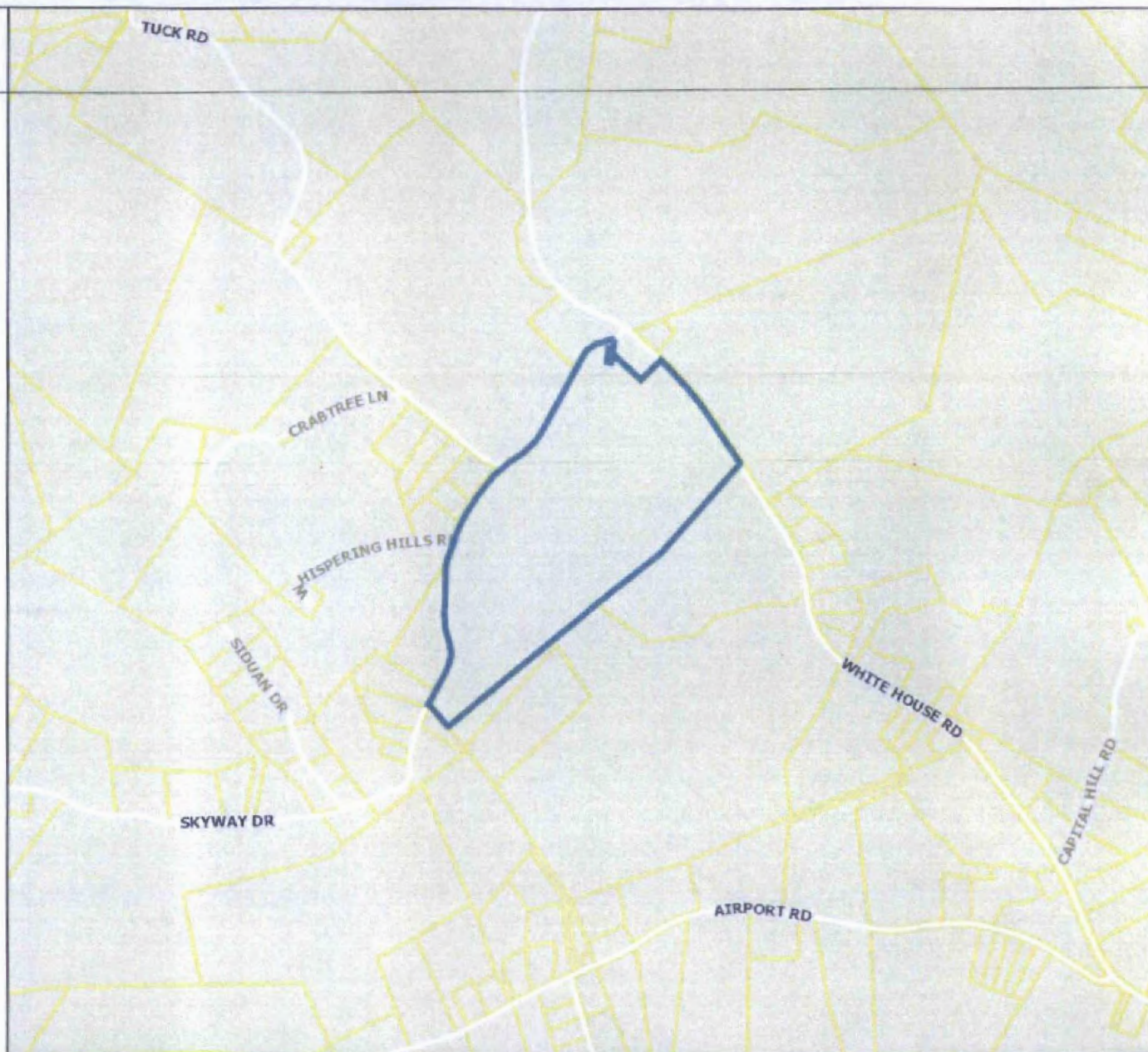
P087-10

Bedford, VA

Legend

- Highway
- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Parcels - County
- Parcels - Town

R087-10




Title: Tuck Michael 234 A 14 23401200

Date: 6/15/2016

Feet

0 500 1000 1500 2000
1:18,056 / 1"=1,505 Feet

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[Search](#)[Results](#)[Details](#)[Map](#)[Contact](#) | [GIS Page](#) | [Log On](#) [Printer-Friendly](#)[View in Map](#) **Tax Map #**

234 A 22

Link

234 A 22

Parcel Number(RPC).

23401900

Address[Link to Real Estate Lookup/Sketch](#)[Parcel Information](#)[Valuation](#)[Improvements](#)[Ownership History](#)**General Information****Owner:**

TUCK MICHAEL A

Additional Owner:**Owner Address:**1726 TUCK RD
MONETA, VA 24121**Legal Acreage:**

74.9100

PCDesc:

5 Agricultural/Undeveloped(20-99ac)

Legal Description:

ROCK CASTLE CR

Document Number:

WF160000468

Land Use**Tax Year:** 1997

1998

1999

2000

2001

2002

2003

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2015

2016

R087-11

R087-12

Bedford, VA

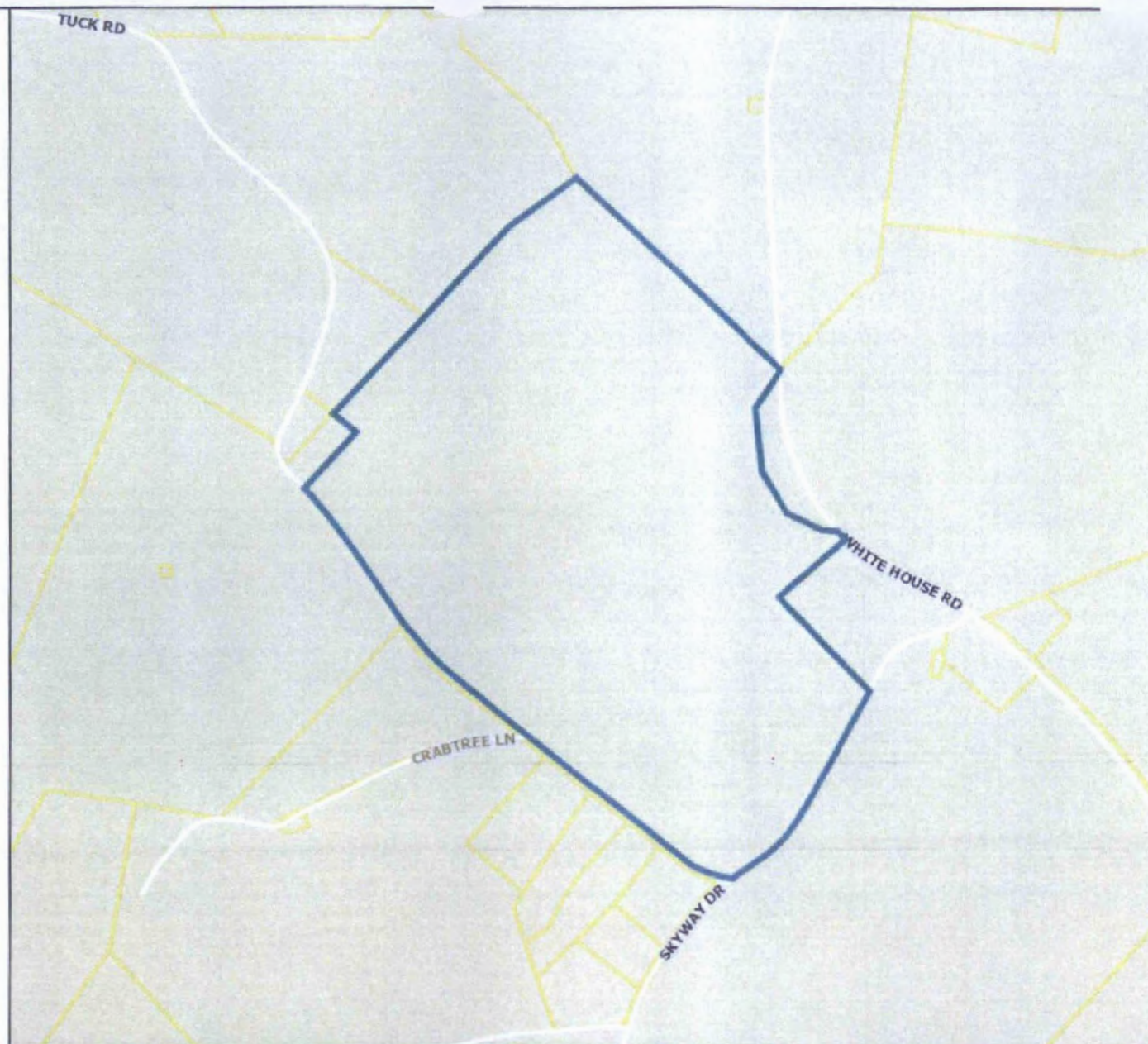
Legend

Highway

- Blue Ridge Parkway
- US Primary
- Virginia Primary
- Roads
- Parcels - County
- Parcels - Town
- Public School Boundary

R087-11

R087-12



Title: Tuck Michael 234 A 22 23401900

Date: 6/15/2016

Feet

0 200 400 600 800
1:9,028 / 1"=752 Feet

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Landowner Coordination Form

Permittee: Bionomic Services Inc
County or City: Bedford County

(Signatures not required on this page)

[illegible]

Michael Tuck Farm

Bio-Nomic Services, Inc. is filing this application to apply approved (VA0025020) Class B biosolids to this designated farm land in Bedford County, Virginia.

The farm is located in the Moneta community off Tuck Road and all fields are located in a predominately agricultural areas. All streams, drainage features, rock outcrops, structures, dwellings, property lines, roadways and wells are designated and buffered as required. There are five public contact sites in the vicinity of the farm. See the attached buffer maps for more details. Biosolids are currently being used as crop nutrients on close by farms.

Mr. Tuck operates his acreage as either hay production/pasture, or small grain rotation. The small grain rotation is winter grain planting that is harvested as early season weed free mulch, and then followed with soybean or corn planting designated as livestock feedstock. The grass cover in the hayfields/ pastures is predominately fescue.

The current fescue hay fields are: RO 87-1, 87-3, 87-5, 87-10, 87-11.

The current orchardgrass / alfalfa fields are: RO 87-4, 87-9

The current fescue pastures are: RO 87-2, 87-4, 87-6, 87-7, 87-8, 87-12.

The occasional small grain rotation fields are: RO 87-4.

Nutrient Management Plans will be written by a certified plan writer to address the application of biosolids to the designated fields that will address the most recent planned use of the fields should any changes occur in agricultural practices.



Ⓐ Brownlee Ave SE, Roanoke, VA 24014

Ⓑ 1655 Tuck Rd, Moneta, VA 24121

54 min, 32.0 mi

Light traffic (50 min without traffic)

Via VA-24, VA-24 E

Billy Tuck Farm
RO 87

Ⓐ Brownlee Ave SE, Roanoke, VA 24014

↑	1. Depart Brownlee Ave SE toward Kindred St SE	161 ft
↘	2. Turn right onto Kindred St SE	479 ft
↘	3. Turn right onto Carlisle Ave SE , and then immediately turn right onto Bennington St SE	0.8 mi
↘	4. Turn right onto VA-24 Pass Hess in 1.0 mi	2.2 mi
↑	5. Keep left to stay on VA-24 E / Bypass Rd	0.4 mi
↘	6. Turn right to stay on VA-24 E Pass Exxon in 4.4 mi	19.1 mi, 26 min
↘	7. Turn right onto VA-122 / Moneta Rd Pass Marathon in 2.7 mi	4.9 mi
↙	8. Turn left onto White House Rd	3.1 mi
↘	9. Turn right onto Radford Church Rd	0.6 mi
↙	10. Turn left onto Tuck Rd	0.6 mi
	Arrive at Tuck Rd	
	11. The last intersection is Radford Church Rd If you reach Crabtree Ln, you've gone too far	

Ⓑ 1655 Tuck Rd, Moneta, VA 24121



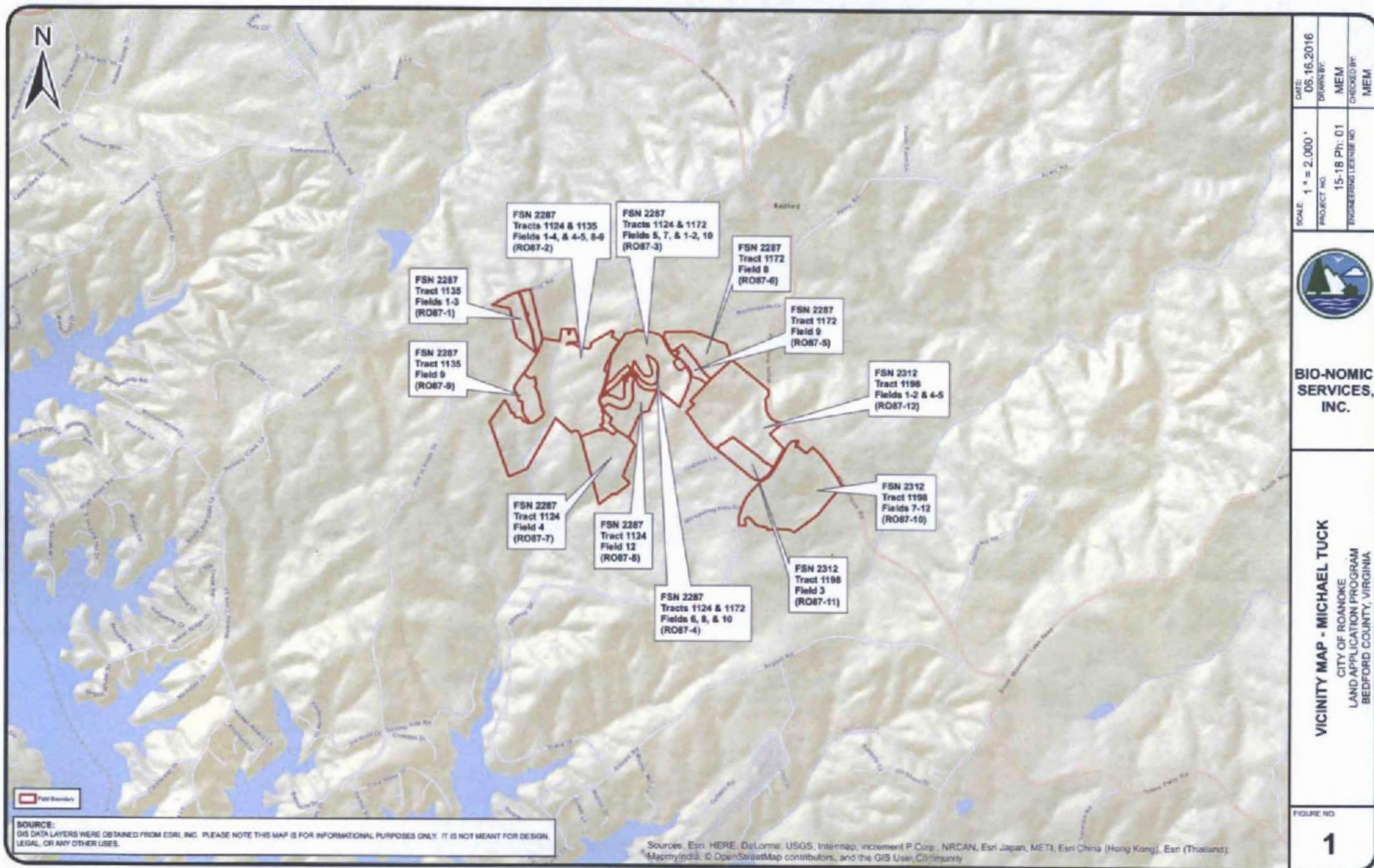
A Brownlee Ave SE, Roanoke, VA 24014



B 1655 Tuck Rd, Moneta, VA 24121



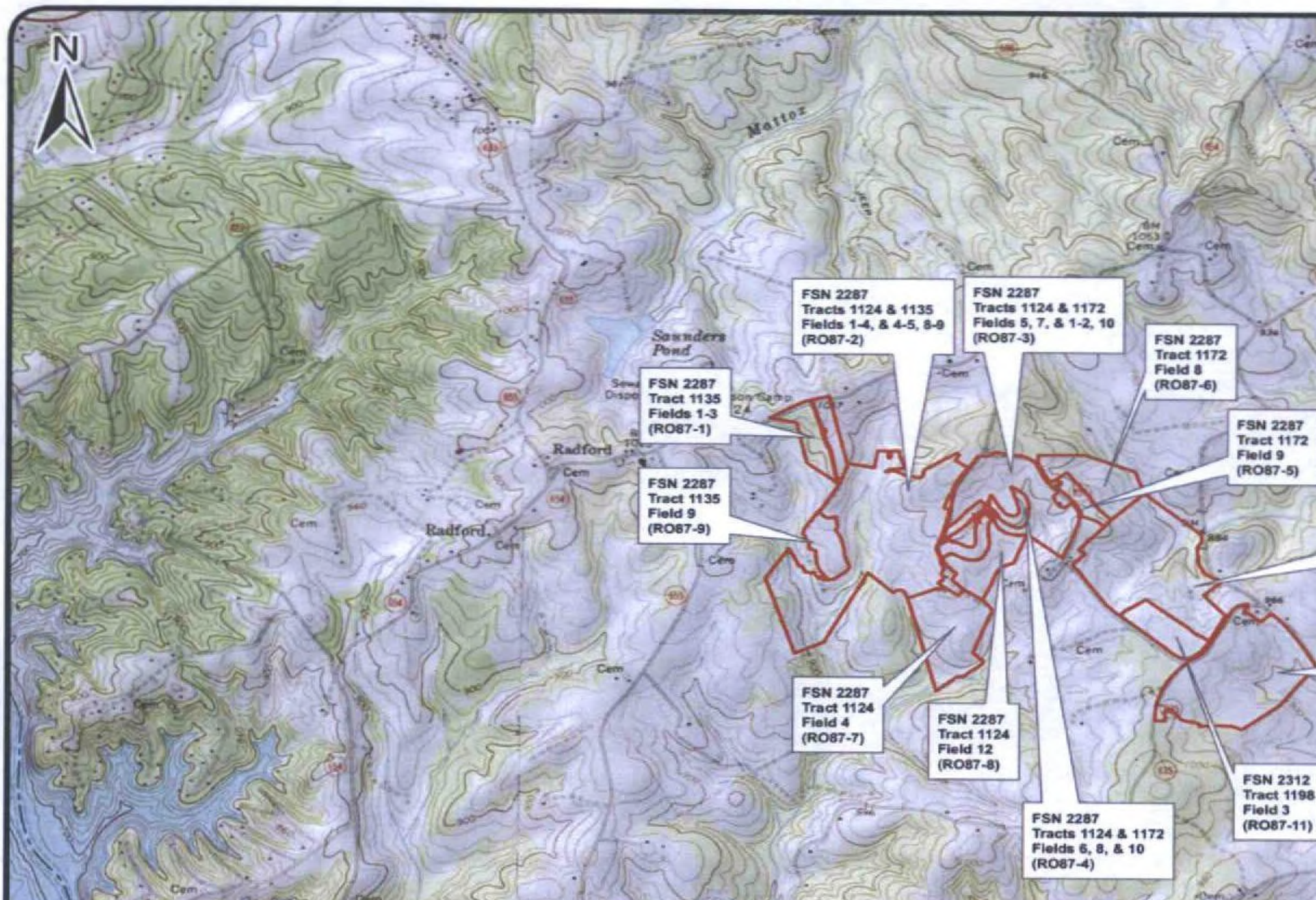
These directions are subject to the Microsoft® Service Agreement and are for informational purposes only. No guarantee is made regarding their completeness. Construction projects, traffic, or other events may cause actual conditions to differ from these results. Map and traffic data © 2016 HERE™.



**BIO-NOMIC
SERVICES,
INC.**

VICINITY MAP - MICHAEL TUCK
CITY OF ROANOKE
LAND APPLICATION PROGRAM
BEDFORD COUNTY, VIRGINIA

C:\projects\2015-18 Ph: 01\BIO-NOMIC\Michael Tuck Map\vicinity.mxd





Field Boundary
NRCS Soil Boundary

SOURCE:
GIS DATA LAYERS WERE OBTAINED FROM ESRI, INC. PLEASE NOTE THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, the GIS User Community

FSN 2287
Tracts 1124 & 1172
Fields 5, 7, & 1-2, 10
(RO87-3)

FSN 2287
Tracts 1124 & 1135
Fields 1-4, & 4-5, 8-9
(RO87-2)

FSN 2287
Tract 1172
Field 8
(RO87-6)

FSN 2287
Tract 1172
Field 9
(RO87-5)

FSN 2287
Tracts 1124 & 1172
Fields 6, 8, & 10
(RO87-4)

FSN 2287
Tract 1124
Field 12
(RO87-8)

FSN 2287
Tract 1124
Field 4
(RO87-7)

FSN 2287
Tract 1135
Fields 1-3
(RO87-1)

FSN 2287
Tract 1135
Field 9
(RO87-9)

SOIL LEGEND
7B - Cecil fine sandy loam, 2 - 7% slopes
7C - Cecil fine sandy loam, 7 - 15% slopes
9B - Cullen loam, 2 - 7% slopes
9C - Cullen loam, 7 - 15% slopes
9D - Cullen loam, 15 - 25% slopes
19C - Iredell fine sandy loam, 7 - 15% slopes
21D3 - Madison sandy clay loam, 15 - 25% slopes
21E3 - Madison sandy clay loam, 25 - 40% slopes
24B - Mecklenburg loam, 2 - 7% slopes
24C - Mecklenburg loam, 7 - 15% slopes
24D - Mecklenburg loam, 15 - 25% slopes
26D - Poindexter fine sandy loam, 15 - 25% slopes
26E - Poindexter fine sandy loam, 25 - 60% slopes
33C - Turbeville fine sandy loam, 7 - 15% slopes

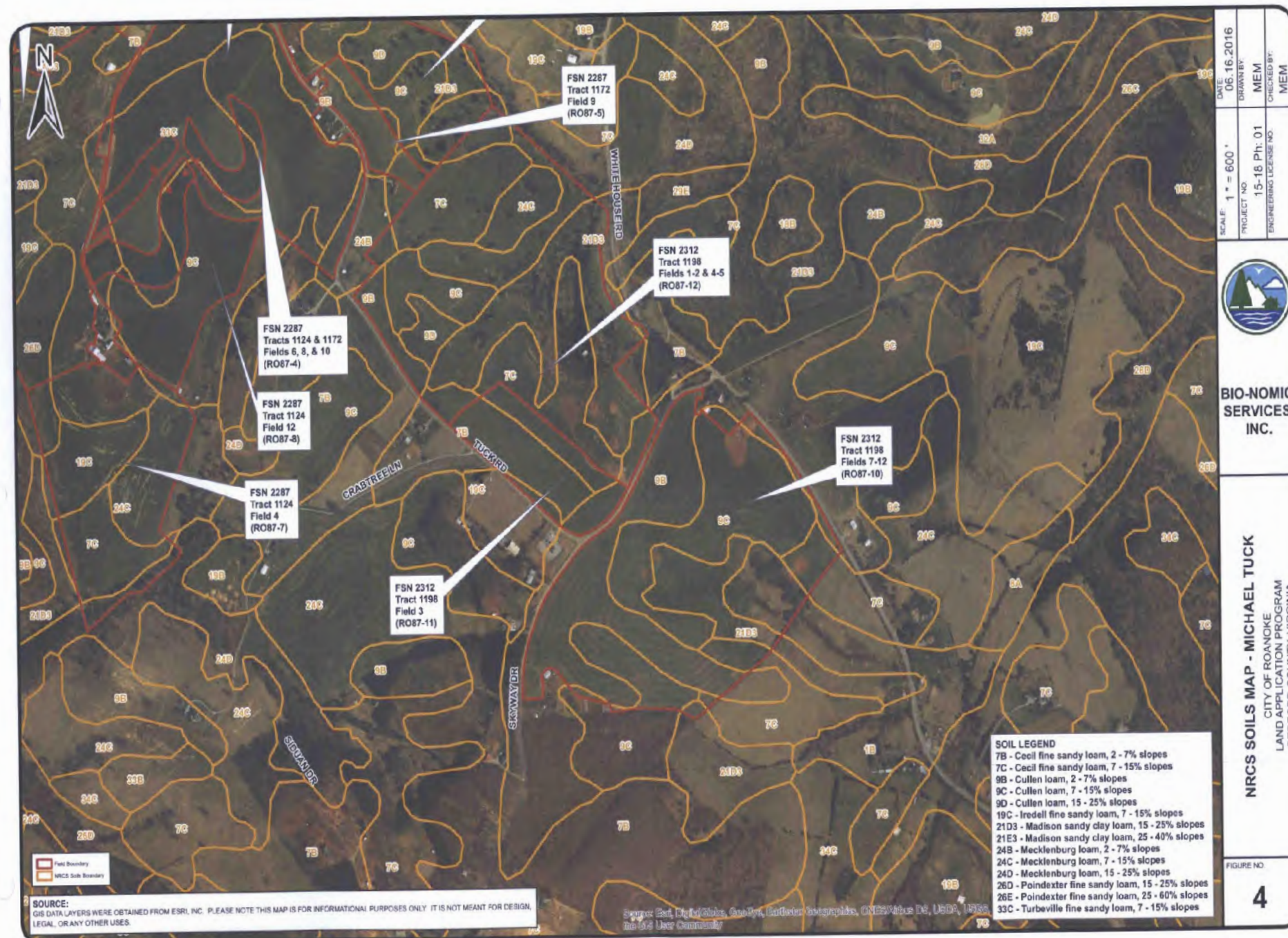
FSN 2312
Tract 1198
Field 3
(RO87-11)

DATE: 06.16.2016	SCALE: 1" = 600'	 BIO-NOMIC SERVICES, INC.
DRAWN BY: MEM	PROJECT NO. 15-18 Ph: 01	
CHECKED BY: MEM	ENGINEERING LICENSE NO.	

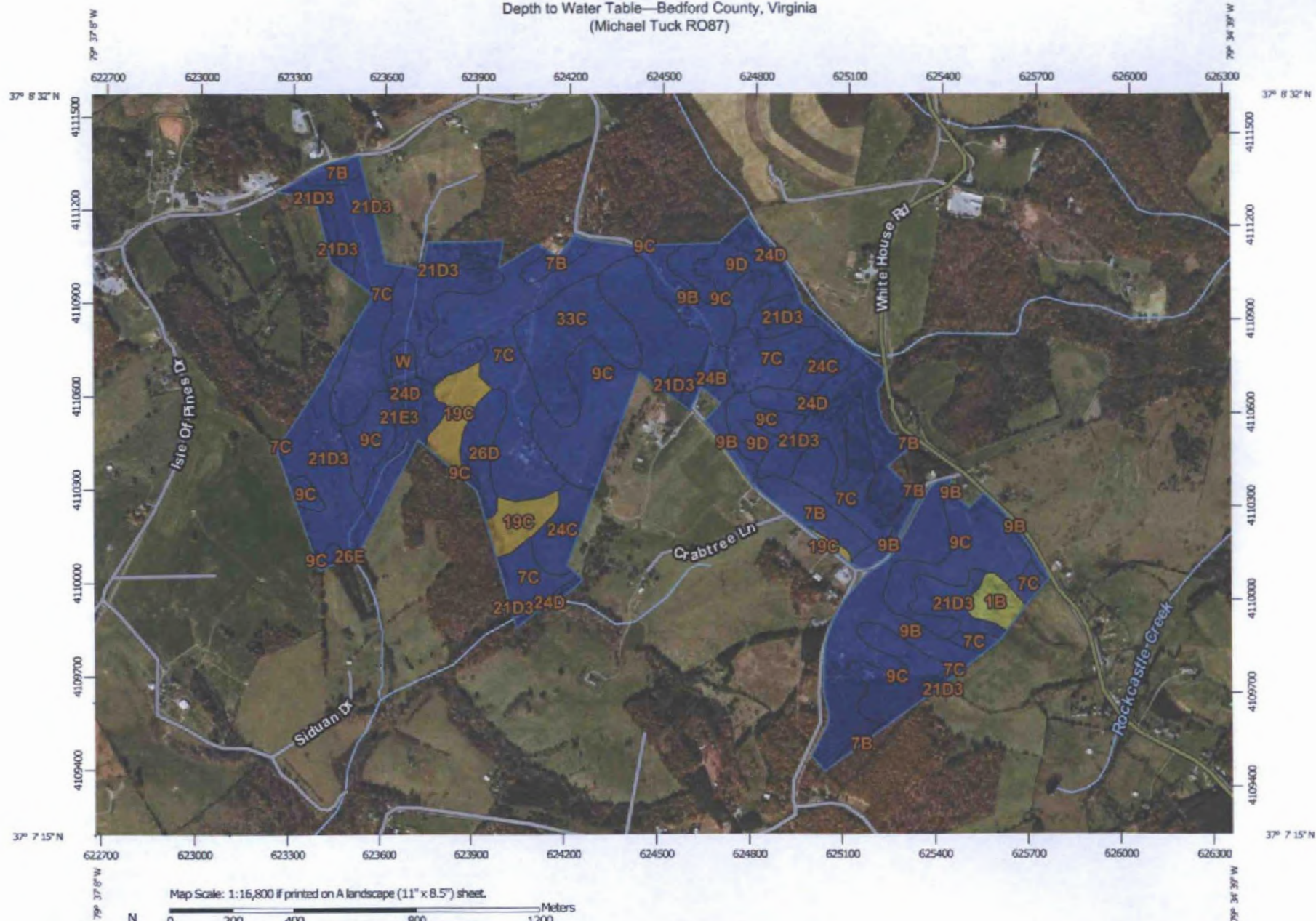
NRCS SOILS MAP - MICHAEL TUCK
CITY OF ROANOKE
LAND APPLICATION PROGRAM
BEDFORD COUNTY, VIRGINIA

FIGURE NO. **3**

C:\aragis\2009\1508-09-059 Bio-nomic\Michael Tuck\Map\NRCS.mxd



Depth to Water Table—Bedford County, Virginia (Michael Tuck RO87)



Map Scale: 1:16,800 if printed on A landscape (11" x 8.5") sheet.

0 200 400 800 1200 Meters

0 500 1000 2000 3000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84



Natural Resources
Conservation Service

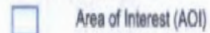
Web Soil Survey
National Cooperative Soil Survey

6/14/2016
Page 1 of 7

Depth to Water Table—Bedford County, Virginia
(Michael Tuck R087)

MAP LEGEND

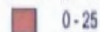
Area of Interest (AOI)



Area of Interest (AOI)

Soils

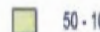
Soil Rating Polygons



0 - 25



25 - 50



50 - 100



100 - 150



150 - 200

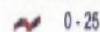


> 200



Not rated or not available

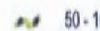
Soil Rating Lines



0 - 25



25 - 50



50 - 100



100 - 150



150 - 200

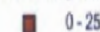


> 200

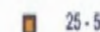


Not rated or not available

Soil Rating Points



0 - 25



25 - 50



50 - 100



100 - 150



150 - 200



> 200



Not rated or not available

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bedford County, Virginia

Survey Area Data: Version 11, Dec 11, 2013

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 8, 2010—Mar 17, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Depth to Water Table

Depth to Water Table— Summary by Map Unit — Bedford County, Virginia (VA019)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
1B	Altavista fine sandy loam, 2 to 7 percent slopes	61	5.2	1.1%
7B	Cecil fine sandy loam, 2 to 7 percent slopes	>200	16.1	3.5%
7C	Cecil fine sandy loam, 7 to 15 percent slopes	>200	104.5	22.8%
9B	Cullen loam, 2 to 7 percent slopes	>200	49.7	10.9%
9C	Cullen loam, 7 to 15 percent slopes	>200	97.7	21.3%
9D	Cullen loam, 15 to 25 percent slopes	>200	11.7	2.6%
19C	Iredell fine sandy loam, 7 to 15 percent slopes	30	16.5	3.6%
21D3	Madison sandy clay loam, 15 to 25 percent slopes, severely eroded	>200	82.6	18.0%
21E3	Madison sandy clay loam, 25 to 40 percent slopes, severely eroded	>200	2.3	0.5%
24B	Mecklenburg loam, 2 to 7 percent slopes	>200	4.7	1.0%
24C	Mecklenburg loam, 7 to 15 percent slopes	>200	12.5	2.7%
24D	Mecklenburg loam, 15 to 25 percent slopes	>200	19.8	4.3%
26D	Poindexter fine sandy loam, 15 to 25 percent slopes	>200	8.7	1.9%
26E	Poindexter fine sandy loam, 25 to 60 percent slopes	>200	1.0	0.2%
33C	Turbeville fine sandy loam, 7 to 15 percent slopes	>200	23.0	5.0%
W	Water	>200	2.4	0.5%
Totals for Area of Interest			458.3	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish color (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

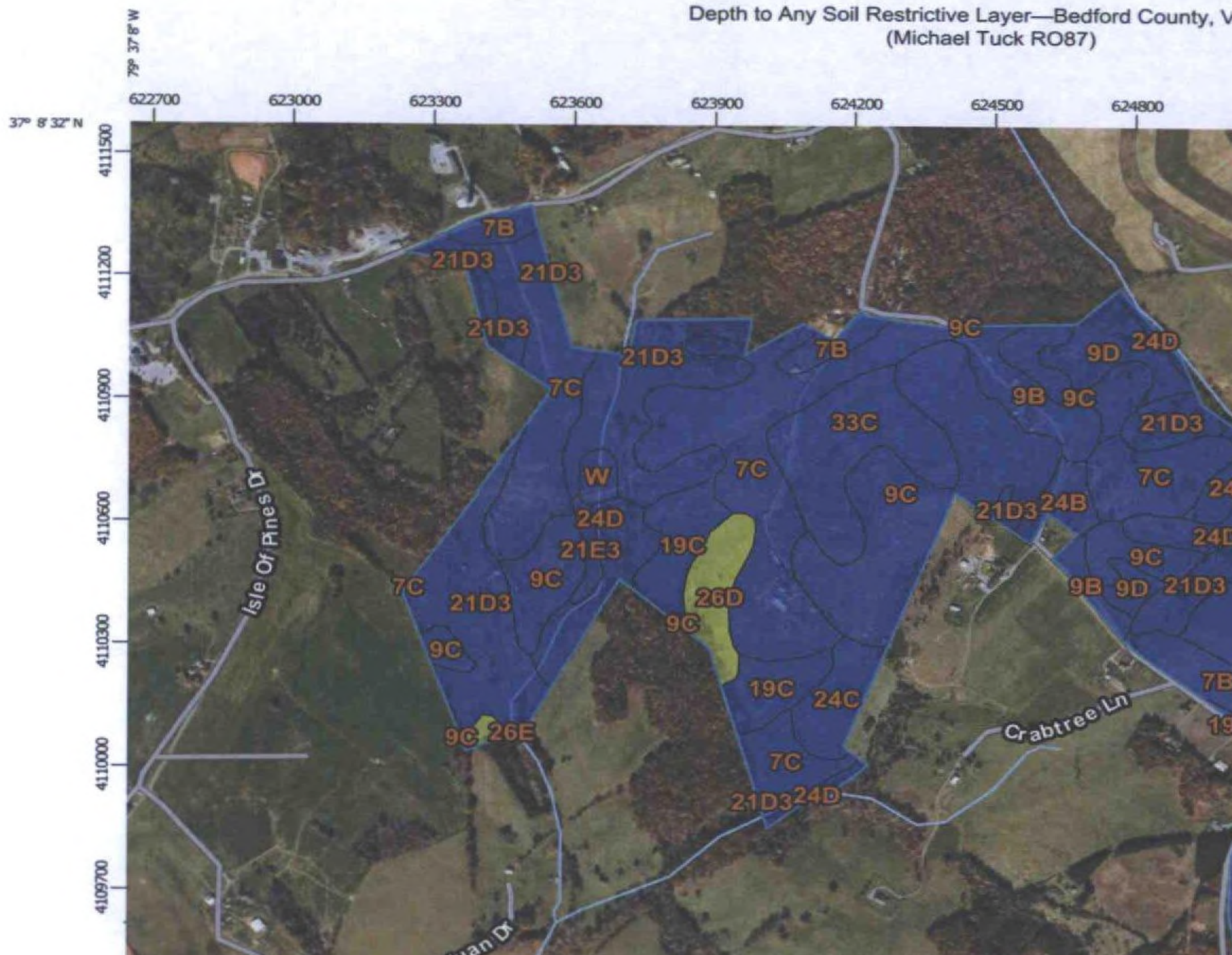
Interpret Nulls as Zero: No

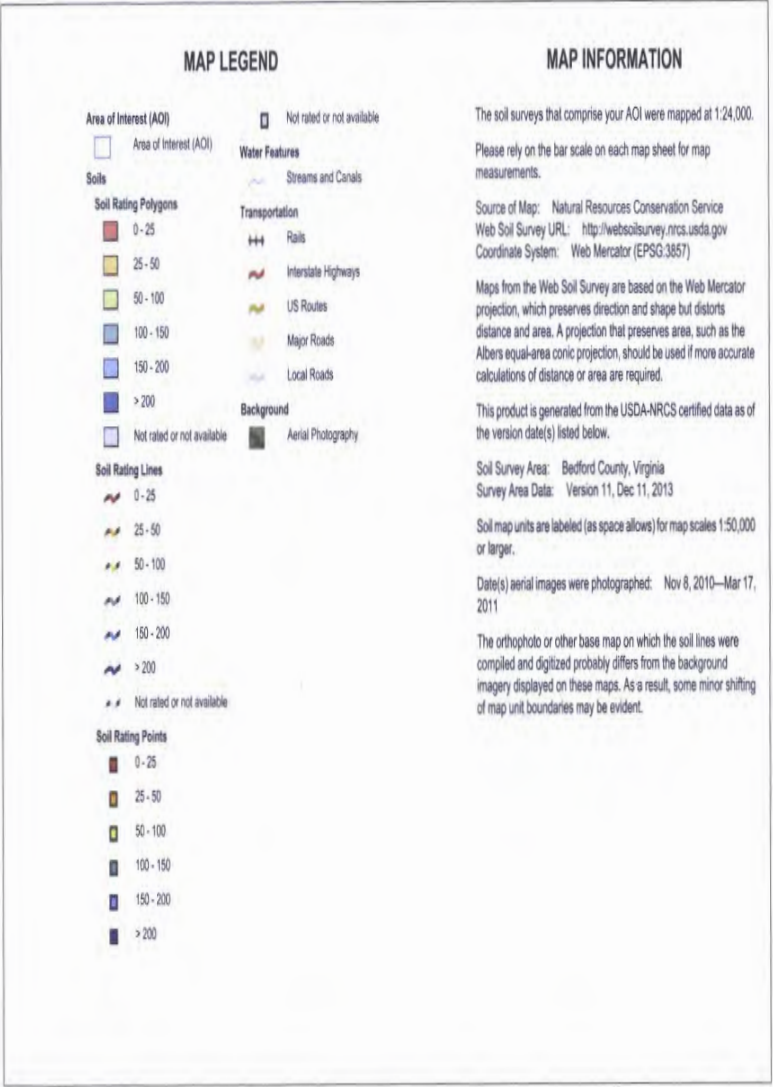
Beginning Month: January

Ending Month: December



Depth to Any Soil Restrictive Layer—Bedford County, VA
(Michael Tuck RO87)





Depth to Any Soil Restrictive Layer

Depth to Any Soil Restrictive Layer— Summary by Map Unit — Bedford County, Virginia (VA019)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
1B	Altavista fine sandy loam, 2 to 7 percent slopes	>200	5.2	1.1%
7B	Cecil fine sandy loam, 2 to 7 percent slopes	>200	16.1	3.5%
7C	Cecil fine sandy loam, 7 to 15 percent slopes	>200	104.5	22.8%
9B	Cullen loam, 2 to 7 percent slopes	>200	49.7	10.9%
9C	Cullen loam, 7 to 15 percent slopes	>200	97.7	21.3%
9D	Cullen loam, 15 to 25 percent slopes	>200	11.7	2.6%
19C	Iredell fine sandy loam, 7 to 15 percent slopes	>200	16.5	3.6%
21D3	Madison sandy clay loam, 15 to 25 percent slopes, severely eroded	>200	82.6	18.0%
21E3	Madison sandy clay loam, 25 to 40 percent slopes, severely eroded	>200	2.3	0.5%
24B	Mecklenburg loam, 2 to 7 percent slopes	>200	4.7	1.0%
24C	Mecklenburg loam, 7 to 15 percent slopes	>200	12.5	2.7%
24D	Mecklenburg loam, 15 to 25 percent slopes	>200	19.8	4.3%
26D	Poindexter fine sandy loam, 15 to 25 percent slopes	56	8.7	1.9%
26E	Poindexter fine sandy loam, 25 to 60 percent slopes	56	1.0	0.2%
33C	Turbeville fine sandy loam, 7 to 15 percent slopes	>200	23.0	5.0%
W	Water	>200	2.4	0.5%
Totals for Area of Interest			458.3	100.0%

Description

A "restrictive layer" is a nearly continuous layer having chemical, or thermal properties that impede the movement of water and air through the soil or that restrict root environment. Examples are bedrock, clay, and frozen layers.

This theme presents the depth to any restrictive layer for each map unit. If more than one type of restrictive layer is present in a soil type, the depth to the shallowest restrictive layer described in a map unit, it is represented.

This attribute is actually recorded as a numerical value and a high value indicates the restrictive layer is deep. A "representative" value indicates the restrictive layer is shallow. For this soil property, only one restrictive layer is present.

Rating Options

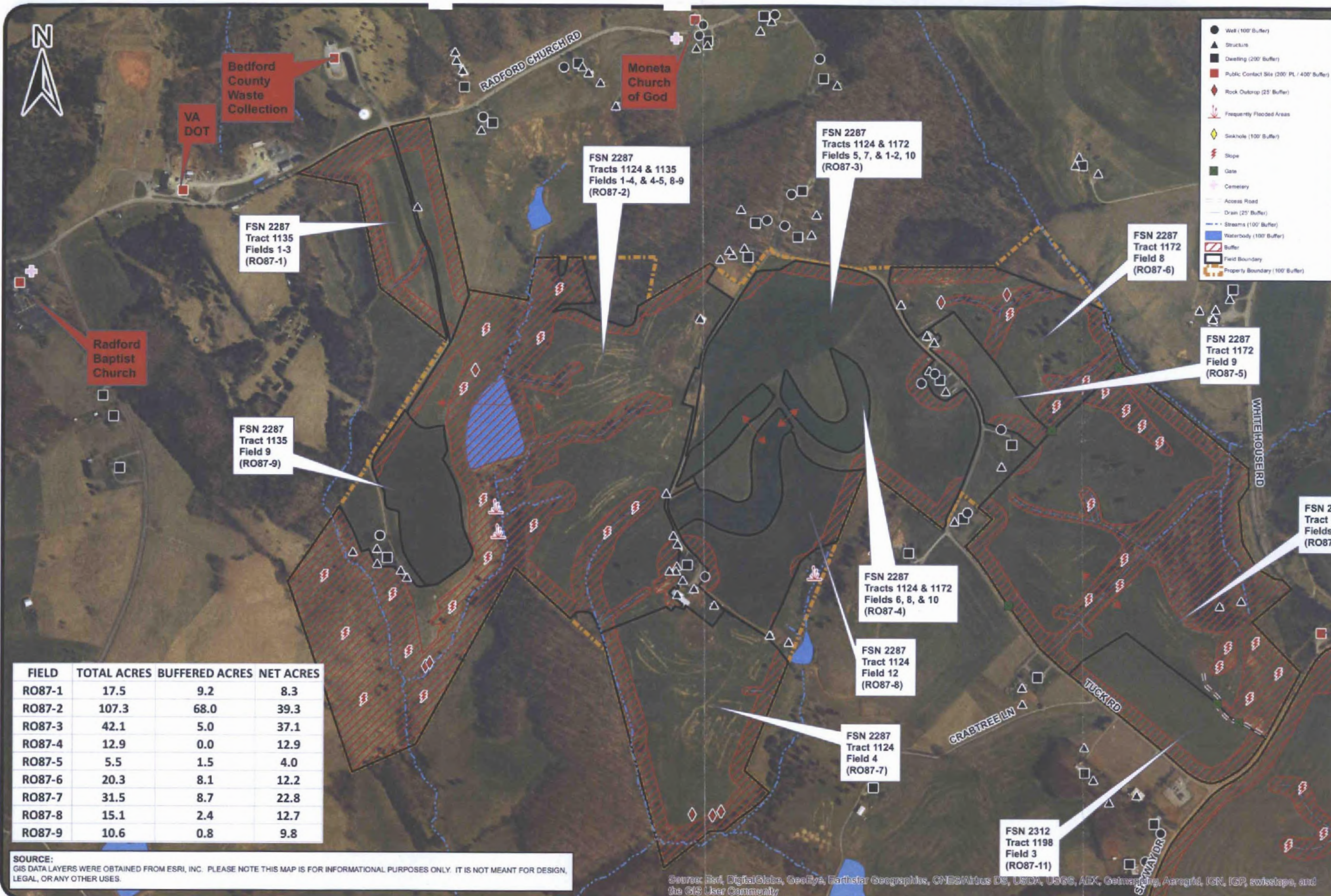
Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None

Tie-break Rule: Lower

Interpret Nulls as Zero: No



DATE: 06.16.2016
DRAWN BY: MEM
CHECKED BY: MEM
PROJECT NO.: 15-18 Ph: 01
ENGINEERING LICENSE NO.:
SCALE: 1" = 600'



BIO-NOMIC SERVICES, INC.

FIGURE NO. 5

5

FIELD	TOTAL ACRES	BUFFERED ACRES	NET ACRES
RO87-1	17.5	9.2	8.3
RO87-2	107.3	68.0	39.3
RO87-3	42.1	5.0	37.1
RO87-4	12.9	0.0	12.9
RO87-5	5.5	1.5	4.0
RO87-6	20.3	8.1	12.2
RO87-7	31.5	8.7	22.8
RO87-8	15.1	2.4	12.7
RO87-9	10.6	0.8	9.8

SOURCE:
GIS DATA LAYERS WERE OBTAINED FROM ESRI, INC. PLEASE NOTE THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

C:\arcgis\2009\1588-09-059 Bio-nomic\Michael Tuck\Map\Buffer.mxd



1 inch = 814 feet

Farm: 2312
Tract: 1198

Wetland Identification Map

Wetland Identification

Wetland Identification

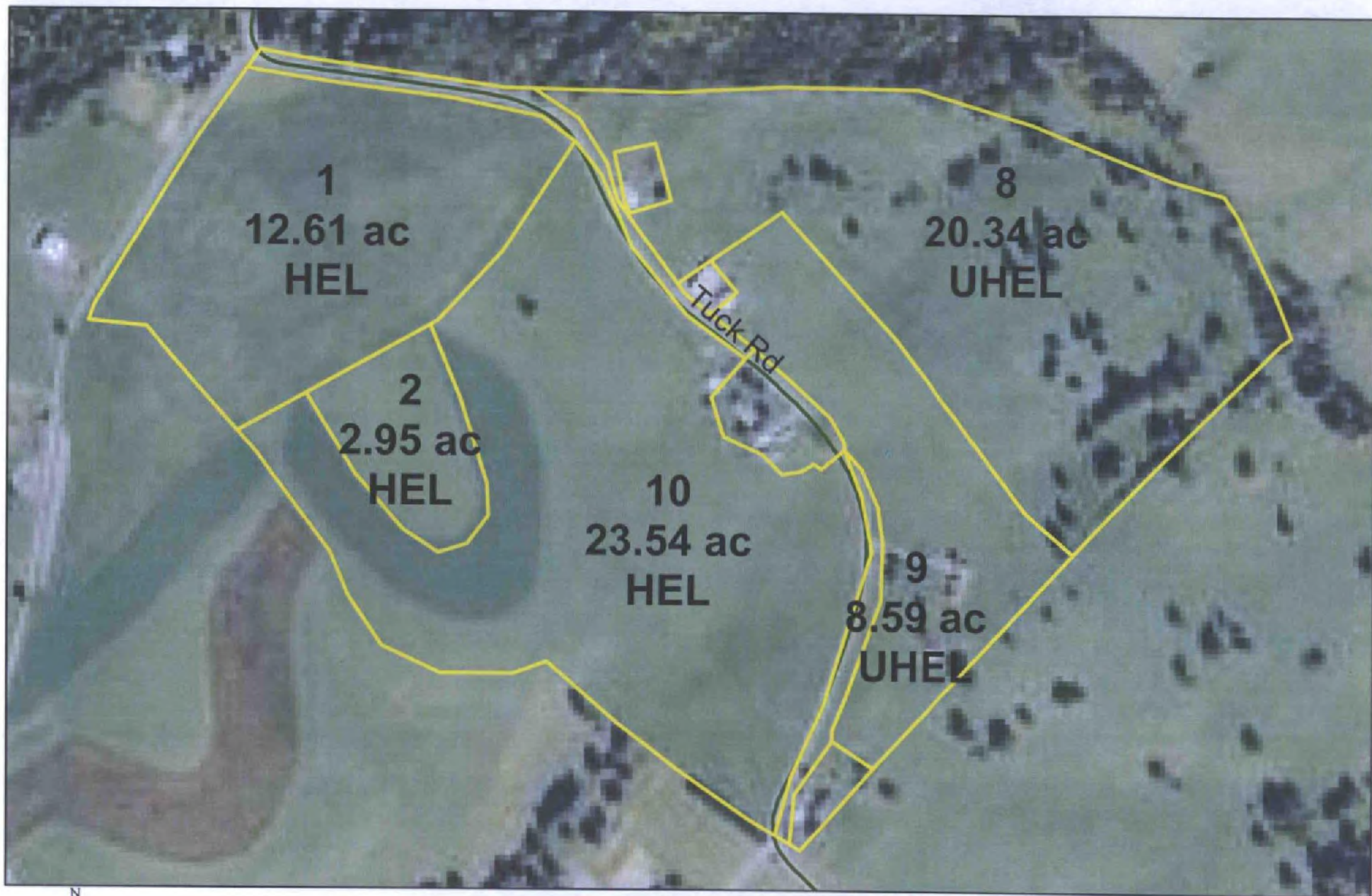
Wetland Identification

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original dermination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.



Bedford County, VA

June 15, 2016



1 inch = 298 feet

Farm: 2287
Tract: 1172

Wetland Determination Map

Wetland Line

Wetland Area

Wetland Area

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original dermination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.



Bedford County, VA

March 21, 2011



1 inch = 702 feet

Farm: 2287
Tract: 1135

Wetland Determination Map

Wetland Area

Wetland Area

Wetland Area

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.



Bedford County, VA

March 21, 20'



1 inch = 644 feet

Farm: 2287
Tract: 1124

Wetland of Conservation Value Map, 2010

Wetland of Conservation Value

Wetland of Conservation Value

Wetland of Conservation Value

Disclaimer: Wetland identifiers do not represent the size, shape or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact wetland boundaries and determinations, or contact NRCS.



Bedford County, VA

March 21, 2010

Report Number: 16-098-0504

Account Number: 45671



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Joel Coert

516 ROUNDTREE RD

CHARLOTTE NC 28217

"Every acre...Every year."™

Grower: TUCK

Submitted By: DON GREENE

Farm ID: RO-87

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index Mehlich 3 Loss On Ignition Water pH

Date Received: 04/07/2016

Date Of Analysis: 04/08/2016

Date Of Report: 04/08/2016

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
87-1	06723	5.1 H		135	85 H NC = 71			51 VL NC = 26	354 H	1820 H		7.0		0.0	12.2
87-2	06724	3.3 M		104	17 L NC = 14			290 VH NC = 148	230 H	1064 M		6.7		0.4	8.4
87-3	06726	3.7 M		113	44 M NC = 37			55 VL NC = 28	238 H	1058 M		6.5		0.6	8.0
87-4	06727	4.5 M		124	29 L NC = 24			43 VL NC = 22	323 H	1424 M		6.4		1.0	10.9
87-5	06728	3.4 M		105	70 H NC = 58			82 L NC = 42	242 H	1216 M		6.6		0.5	8.8

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts	Chloride	Aluminum
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate	Cl ppm Rate	Al ppm
87-1	1.1	24.2	74.6		0.0										
87-2	8.9	22.8	63.3		4.8										
87-3	1.8	24.8	66.1		7.5										
87-4	1.0	24.7	65.3		9.2										
87-5	2.4	22.9	69.1		5.7										

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Paucic McGeary*

Paucic McGeary

Report Number: 16-098-0504

Account Number: 45671



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Grower: TUCK

Submitted By: DON GREENE

Farm ID: RO-87

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index Mehlich 3 Loss On Ignition Water pH

Date Received: 04/07/2016

Date Of Analysis: 04/08/2016

Date Of Report: 04/08/2016

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
87-6	06729	4.1 M	MIN	119	72 H NC = 60			207 VH NC = 106	264 H	1161 M		6.7		0.4	8.9
87-7	06730	6.4 H	MIN	150	178 VH NC = 148			597 VH NC = 305	392 H	1522 M		6.1	6.73	2.0	14.4
87-8	06731	6.4 H	MIN	150	169 VH NC = 141			455 VH NC = 233	424 H	1871 M		6.9		0.2	14.3
87-9	06732	4.2 M	MIN	118	68 H NC = 57			363 VH NC = 186	192 M	1357 M		5.9	6.74	1.9	11.2
Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts	Chloride	Aluminum
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate	Cl ppm Rate	Al ppm
87-6	6.0	24.7	65.2		4.5										
87-7	10.6	22.7	52.8		13.9										
87-8	8.2	24.7	65.4		1.4										
87-9	8.3	14.3	60.6		17.0										

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Paucie McGeary*

Paucie McGeary

Report Number: 16-168-0521

Account Number: 45671



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Grower: Michael Tuck

Submitted By: Martin Mabe
Farm ID: RO87

SOIL ANALYSIS REPORT

Analytical Method(s): Lime Index Mehlich 3 Loss On Ignition Water pH

Date Received: 06/16/2016

Date Of Analysis: 06/17/2016

Date Of Report: 06/17/2016

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm Rate	ppm Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
RO87-10	25715	4.1 M	MIN	122	10 VL NC = 8			36 VL NC = 18	315 VH	792 M		6.5		0.5	7.2
RO87-11	25716	4.3 M	MIN	125	20 L NC = 17			21 VL NC = 11	301 VH	839 M		6.2		0.9	7.7
RO87-12	25717	5.0 H	MIN	139	10 VL NC = 8			315 VH NC = 161	342 VH	746 L		6.9		0.1	7.5

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts		
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate		
RO87-10	1.3	36.5	55.0		6.9										
RO87-11	0.7	32.6	54.5		11.7										
RO87-12	10.8	38.0	49.7		1.3										

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: *Pauc McGroary*

Pauc McGroary